

### Abstract

An object of the present invention is to provide a method of forming a thin film of excellent quality by generating discharge plasma using gaseous raw material including a carbon source under an atmosphere of a relatively high pressure of 100 Torr or higher. A substrate 6 is mounted on at least one of opposing electrodes 4 and 5. A pulse voltage is applied on the opposing electrodes 4 and 5 under a pressure of 100 to 1600 Torr in an atmosphere containing gaseous raw material "A" including a carbon source to generate discharge plasma. A thin film 7 is thus formed on the substrate 6. The pulse voltage has a pulse duration of 10 to 1000 nsec.